JP-09-090916

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Field of the Invention] This invention relates to the display which forms an image with a field serial mode.
[0002]
[Description of the Prior Art] When displaying a color picture, to a cathode-ray tube (Cathode Ray Tube...CRT) R, What establish three electron beams corresponding to G and B each color, and the fluorescent substance of R, G, and B of a cathode-ray tube is made to irradiate coincidence to these electron beams, and displays an image directly by the Rhine scan, The color picture was compounded combining the dichroic mirror which decomposes into the RGB three primary colors the flux of light by which outgoing radiation was carried out from three small monochrome liquid crystal panels and light sources, and it has projected on the screen etc. in use. However, in order that any image display device of the above-mentioned method may form an image in three primary colors, there is a problem that precise color registration needs to be adjusted and it becomes expensive. Then, as other methods, it is made to correspond to the color of R, G, and B, one frame is formed with the field screen of these three sheets for every 1 field screen, and the so-called Junji Men type it is made to have a color picture for one sheet expressed by the after-image phenomenon acquired on each of this field screen is also known.
[0003] As an example of a configuration of the display for obtaining the field image of every R, G, and B to Junji Men For example, the liquid crystal shutter (Liquid Crystal Shutter...LCS) optical system which can be switched so that only the light of one color of R, G, and B may be passed is known. This liquid crystal shutter optical system is established to the front face of the screen section of CRT, and if sequential change control is performed so that it may be in the condition which can penetrate only the light of any one color of R, G, and the B for every field, each field image of R, G, and B can be obtained one by one. In addition, by CRT, the display of a field image is performed based on the luminance signal corresponding to every R, G, and B in this case.
[0004] Drawing 6 is drawing showing an example of a circuit block of the video-signal processing for obtaining the field image of every R in a field serial mode, G, and B. The usual composite video signal A, i.e., the video signal with which one frame is made into 1 / 60 seconds as shown in drawing 7 (a), is first inputted into the RGB separation circuit 20, separation processing of a chrominance signal is performed, and the primary signal of R, G, and B is generated. And after changing each primary signal into a digital signal with A/D converters 21a, 21b, and 21c, respectively, it is made to once write in R memory 22a of the memory section 22 of a FiFo mold, B memory 22b, and G memory 22c, respectively. The Junji Men signal C with which sequential formation of the field of each primary signal of RGB is carried out into one frame as shown in drawing 7 (b) comes to be generated by beginning to read RGB each primary signal by one 3 times [at the time of writing] the rate of this one by one, and changing into an analog signal from the memory section 22 with D/A converter 23, when performing read-out.
[0005] Drawing 8 is equipped with liquid crystal shutter optical system which was described above, and shows the example of a configuration of the display which forms an image with the Junji Men signal C shown in drawing 7 simple. In drawing 8 , CRT11 is a cathode-ray tube of high brightness which displays the Junji Men signal C by the brightness of each primary signal shown in drawing 7 (b), and the light which carried out outgoing radiation from this CRT11 can form a color picture now by penetrating the liquid crystal shutter optical system 12 arranged ahead [that]. This liquid crystal shutter optical system 12 was constituted by U.S. Pat. No. 4758818, the color filter which penetrates the light of a specific color so that No. 4635051 or No. 4611889 may similarly see and a polarizing plate, and the liquid crystal shutter, and it is equipped with the color polarizing plates 13 and 15, a polarizing plate 17, and liquid crystal cells 14 and 16 so that it may state below.
[0006] Liquid crystal cells 14 and 16 are arranged among the color polarizing plates 13 and 15 and between the color polarizing plate 15 and the polarizing plate 17. For example, the liquid crystal cells 14 and 16 in this case are liquid crystal (for example), respectively. [pneumatic **] Give delay of 0 or the half-wave length to specific

wavelength using birefringences, such as a SUMEFU tick and FLC, or optical activity (rotatory polarization). namely, when 90-degree polarization of the plane of polarization is carried out and the drive is made off When you are trying to be obtained and the condition of carrying out 90-degree polarization of the light of the color made into specific plane of polarization with the color polarizing plates 13 and 15 is beforehand set to ON on the other hand, he is trying to be in the condition of penetrating the light by which incidence was carried out as it is. Therefore, the light which passes the last polarizing plate 17 by changing the combination of ON/OFF state of liquid crystal cells 14 and 16 becomes possible [switching so that only the light of any one color of three-primary-colors R, and G and B may be made to choose and penetrate].

[0007] Moreover, the above mentioned Junji Men signal C is inputted into a synchronous circuit 18, and a field synchronizing signal, a frame alignment signal, etc. are extracted here. A control circuit 19 is constituted so that the various functional circuit sections of a display can be controlled, and the LCS drive circuit 20 which generates the driving signal for performing on-off control of liquid crystal cells 14 and 16 based on the supplied frame alignment signal, i.e., the main deviation frequency synchronizing signal, from a synchronous circuit 18 as shown in drawing is established in the interior in this case. In addition, the structure of the liquid crystal shutter optical system 12 shown in this drawing is an example, and if it is constituted so that colour selection may be performed based on the driving signal from a control circuit 19 side, it does not need to be limited to this structure.

[0008] The LCS drive circuit 20 generates a driving signal from a synchronizing signal, and controls ON/OFF of liquid crystal cells 14 and 16. That is, sequential formation of each image of RGB can be carried out now by making three ON/OFF control among one frame.

[0009] Next, according to drawing 9 (a), (b), and (c), selection of the color by the liquid crystal shutter optical system 12 is explained. Drawing 9 (a) shows the condition that, as for R light and drawing 9 (b), B light is chosen, and, as for drawing 9 (c), G light is chosen, and it becomes possible by repeating successively this drawing (a) thru/or the change condition of (c) to form a color picture by Junji Men of RBG. In addition, the horizontal and vertical polarization shaft is not shown in the color polarizing plates 13 and 15 of these drawings, and a polarizing plate 17.

[0010] Moreover, drawing 9 (a), (b), and (c) explain the color polarizing plates 13 and 15 and a polarizing plate 17 as having the property shown below as an example.

- Color polarizing plate 13 ... From horizontal polarization shaft 13a, R light from perpendicular polarization shaft 13b and B light penetrate [G light and R light] again.
- Color polarizing plate 15 ... From level polarization shaft 15a, G light from perpendicular polarization shaft 15b and B light penetrate [R light] again.
- Polarizing plate 17 ... Only the light of a perpendicular polarization component is penetrated.

[0011] For example, as shown in drawing 9 (a), for example, when ON and a liquid crystal cell 16 have an off liquid crystal cell 14, R light which penetrated the perpendicular polarization shaft of the color polarizing plate 13, B light and G light which penetrated the level polarization shaft, and R light pass the liquid crystal cell 14 set to ON as it is, and reach the color polarizing plate 15. And in the color polarizing plate 15, from a perpendicular polarization shaft, only R light will penetrate from a level polarization shaft, and only B light will pass a liquid crystal cell 16 again. Since a liquid crystal cell 16 is off, 90-degree polarization of the light which carried out incidence is carried out, and R light used as a perpendicular polarization wave comes to penetrate a polarizing plate 17 here.

[0012] Moreover, when both the liquid crystal cell 14 and the liquid crystal cell 16 are ON as shown in drawing 9 (b) for example, R light which penetrated the perpendicular polarization shaft of the color polarizing plate 13, B light and G light which penetrated the level polarization shaft, and R light pass a liquid crystal cell 14 as it is, and reach the color polarizing plate 15. And in the color polarizing plate 15, B light and R light will pass the liquid crystal cell 16 which only R light from a level polarization shaft penetrates again and by which only B light from a perpendicular polarization shaft is further set to ON as it is. And only B light which is a perpendicular polarization component comes to penetrate a polarizing plate 17.

[0013] Moreover, when a liquid crystal cell 14 is OFF and a liquid crystal cell 16 is ON as shown in drawing 9 (c) for example, a polarization component carries out 90-degree polarization of R light which penetrated the perpendicular polarization shaft of the color polarizing plate 13, B light and G light which penetrated the level polarization shaft, and the R light by passing the liquid crystal cell 14 set to OFF, and they reach the color polarizing plate 15. And in the color polarizing plate 15, G light and R light will pass the liquid crystal cell 16 which only R light from a level polarization shaft penetrates again and by which only G light from a perpendicular polarization shaft is further set to ON as it is. And only G light which is a perpendicular polarization component comes to penetrate a polarizing plate 17.

[0014] That is, the sequence of the color chosen by the liquid crystal shutter optical system 12 within one frame comes to be shown in drawing 10 . In drawing 10 (a), the sequence of the color chosen by the liquid crystal shutter

optical system 12 and drawing 10 (b) show ON/OFF of a liquid crystal cell 14, and drawing 10 (c) shows ON/OFF of a liquid crystal cell 16. Namely, by carrying out ON/OFF control of liquid crystal cells 14 and 15, n screens [n+1 / n+2] of each color of R, G, and B can be chosen now within one frame like ... as shown in drawing 10 (a), as shown in drawing 10 (c). In addition, it is also possible for the number of the liquid crystal cells used for the liquid crystal shutter optical system 12 not to be limited to the two above-mentioned sheets, and to make it constitute combining other colors also about the color polarizing plates 13 and 15.

[0015]

[Problem(s) to be Solved by the Invention] By the way, since the image of a white (W) color is obtained by composition of R, G, and B each color in the above-mentioned field serial mode Bodies, such as a white window, for example, when [for example,] the screen top is being quickly moved to the right from the left, When the smoothness of look migration of a viewer and the image of each field of R, G, and B actually shift a little according to time difference, the phenomenon of the color breakup to which colors other than white appear before the body under migration and in the backside will arise.

[0016] Drawing 11 (a) and (b) are drawings showing this color breakup in ** type. the case where a white body projects on a screen since white is obtained by composition of RGB -- the inside of one frame -- R, G, and B each color projects one by one mostly in the same location. And although it will shift and go to right-hand side for every frame as shown in drawing 11 (a) when a body moves to the right from Hidari of a screen, a gap of an image will arise according to the time difference in which each field is formed in this case.

[0017] Furthermore, in order that a viewer's look may move smoothly as shown in the arrow head V, it comes to be a little late [the location to view] for a body as shown by deltaX. that is, these become a cause, for example, it is shown in drawing 11 (b) -- as -- a before [the body P of W color] side -- for example, green -- colors, such as (G) and cyanogen (Cy), -- the color of a magenta (Mg), red (R), etc. appears in the backside, and vision top appearance will become moreover, less good for it

[0018] Moreover, although the response level at the time of ON of liquid crystal cells 14 and 16 can be disregarded quickly enough, when the response at the time of OFF is slow, color shading will occur. although the change of R, G, and B each color is performed at a perpendicular blanking period, when a speed of response in case liquid crystal cells 14 and 16 are set to OFF is slow as shown in drawing 12 , a color does not change to a perpendicular blanking period completely, but other colors will carry out color mixture and color shading will occur at the beginning of the next field, i.e., the screen upper part.

[0019] That is, although a liquid crystal cell 14 becomes off [ON and a liquid crystal cell 16] in the field of R light as illustrated, it is a period SH3. Since both the liquid crystal cells 14 and 15 will be in an ON state then, B color will carry out color mixture to the field of R light. moreover -- although a liquid crystal cell 14 serves as OFF and a liquid crystal cell 16 serves as ON in the field of G color similarly -- period SH4 **** -- both the liquid crystal cells 14 and 16 are turned on, and B color will carry out color mixture to the field of G color. Therefore, there is a trouble that a good image cannot be obtained like the color breakup which carried out point ** according to generating of such color mixture.

[0020]

[Means for Solving the Problem] Two or more deviation filters which make the light which it was made in order that this invention might solve such a trouble, and carried out polarization in the specific direction to the light penetrate, The liquid crystal shutter which performs switching operation which penetrates the light of ON of driver voltage / off more specific plane of polarization, According to the timing of the field screen displayed, have the liquid crystal shutter driving means which can output the driver voltage which performs ON/OFF control of said liquid crystal cell, and it sets with a field serial mode to the display which can display a color picture. It carries out as [display / in addition to the field of red, green, and blue in three primary colors the field of the neutral colors except said at least one or more three primary colors is inserted, one frame is formed by Junji Men, and / a color picture].

[0021] According to this invention, color breakup and color shading can be reduced now to coincidence by preparing the field of W color or the neutral colors of the RGB three primary colors in one frame in addition to the 3 fields of the RGB three primary colors.

[0022]

[Embodiment of the Invention] Hereafter, one gestalt of operation of the display of this invention is explained. Drawing 1 is drawing showing an example of a circuit block of the digital disposal circuit for acquiring the field picture signal of every R in the indicating equipment of the field serial mode which is the gestalt of operation of this invention, G, and B. Also in this operation gestalt, the usual composite color video signal A previously shown in drawing 7 (a) is first inputted into the BGWR separation circuit 1, by predetermined signal processing, a chrominance signal is separated and the three-primary-colors signal of R, G, and B is generated. Furthermore, with the gestalt of this operation, in order to obtain the white (achromatic color) field in addition to the field of a three-

primary-colors signal, one frame is formed using a brightness (Y) signal (W (white) signal) with the primary signal of said R, G, and B, and a total of four signals of W signal which consists of a luminance signal.
[0023] After R, G, B primary signal, and W signal for one frame which were outputted from the RGB separation circuit 1 are changed into a digital signal by A/D-converter2a, 2b, and 2c and 2d, respectively, they are written in B memory 3a of the memory section 3 of a FiFo mold, G memory 3b, W memory 3c, and R memory 3d per each frame image, respectively. and when reading, the Junji Men signal B with which sequential formation of the field of a primary signal and W signal is carried out in the order of BGWR into one frame is generated by carrying out reading appearance of R, G, B primary signal, and the W signal by one 4 times [at the time of writing] the rate of this one by one, and changing into an analog signal with D/A converter 4. Sequential formation of the image of BGWR comes to be carried out by supplying and shining this Junji Men signal B to CRT5, and minding the liquid crystal shutter optical system 6. When white is displayed by this on a screen, it can display as an independent color emitted from a phosphor screen as combination color in three primary colors compounded with the filter.
[0024] Next, according to drawing 2 (a), (b), (c), (d) and drawing 3 R> 3 (a) and (b), and (c), selection of B, G and W by the liquid crystal shutter optical system 6 shown in drawing 1 , and R each color is explained. The liquid crystal shutter optical system 6 explained here is constituted by the liquid crystal cells 8 and 10 of two sheets which constitute the color polarizing plates 7, 9, and 11 and a liquid crystal shutter. As for drawing 2 (a), B light and drawing 2 (b) show the condition that, as for G light and drawing 2 (c), W light is chosen, and, as for drawing 2 (d), R light is chosen, and it becomes possible by repeating successively this drawing (a) thru/or the change condition of (d) to form a color picture by Junji Men of BGWR. Moreover, although a vertical and horizontal polarization shaft is formed like the color polarizing plates 13 and 15 and polarizing plate 17 which showed the color polarizing plates 7, 9, and 11 of these drawings previously to drawing 8 , these polarization shafts are not shown in this drawing.
[0025] In addition, drawing 2 (a), (b), (c), and (d) explain the color polarizing plates 7, 9, and 11 as having the property shown below as an example.
- Color polarizing plate 7 ... From a horizontal polarization shaft, R light from a perpendicular polarization shaft, G light, and B light penetrate [B light] again.
- Color polarizing plate 9 ... From a horizontal polarization shaft, R light from a perpendicular polarization shaft, G light, and B light penetrate [R light] again.
- Color polarizing plate 11 .. From a horizontal polarization shaft, R light from a perpendicular polarization shaft, G light, and B light penetrate [G light] again.
[0026] In addition, it is also possible for the number of the liquid crystal cells used for the liquid crystal shutter optical system 6 not to be limited to the two above-mentioned sheets, and to make it constitute combining other colors also about the property of the color polarizing plates 7, 9, and 11.
[0027] For example, when a liquid crystal cell 8 is OFF and a liquid crystal cell 10 is ON as shown in drawing 2 (a) for example, R light which penetrated the perpendicular polarization shaft of the color polarizing plate 7, G light, B light, and B light that penetrated the level polarization shaft pass the liquid crystal cell 8 set to ON as it is, and reaches the color polarizing plate 9. And in the color polarizing plate 9, from a perpendicular polarization shaft, only R light will penetrate from a level polarization shaft, and only B light will reach a liquid crystal cell 10 again. And since the liquid crystal cell 10 is set to ON, it passes as it is, the color polarizing plate 11 is reached, R light of a level polarization shaft is intercepted here, and only B light comes to penetrate B light and R light.
[0028] Moreover, as shown in drawing 2 (b), for example, when ON and a liquid crystal cell 10 have an off liquid crystal cell 8, B light which penetrated R light which penetrated the perpendicular polarization shaft of the color polarizing plate 7, G light, B light, and a level polarization shaft passes the liquid crystal cell 8 set to ON as it is, and reaches the color polarizing plate 8. And in the color polarizing plate 9, from a perpendicular polarization shaft, R light, G light, and B light penetrate, and B light of a level polarization component is intercepted here. Only G light horizontally deflected among R light to which the polarization component carried out 90-degree polarization, and reached the color polarizing plate 11, G light, and B light comes to penetrate R light which penetrated the perpendicular polarization shaft, G light, and B light by penetrating the liquid crystal cell 10 made off.
[0029] Moreover, when both the liquid crystal cell 8 and the liquid crystal cell 10 are ON as shown in drawing 2 (c) for example, R light which penetrated the perpendicular polarization shaft of the color polarizing plate 7, G light, B light, and B light that penetrated the level polarization shaft pass a liquid crystal cell 8 as it is, and reaches the color polarizing plate 9. And in the color polarizing plate 9, R light, G light, and B light will penetrate from a perpendicular polarization shaft, and B light will be intercepted with a level polarization shaft. Furthermore, since R light, G light, and B light will pass the liquid crystal cell 10 set to ON as it is, R light, G light, and B light, i.e., W (white) light, come to penetrate the color polarizing plate 11.
[0030] As furthermore shown in drawing 2 (d), for example, when ON and a liquid crystal cell 10 have an off liquid crystal cell 8, by passing the liquid crystal cell 8 set to OFF, a polarization component carries out 90-degree

polarization of R light which penetrated the perpendicular polarization shaft of the color polarizing plate 7, G light, B light, and the B light that penetrated the level polarization shaft, and it reaches the color polarizing plate 9. And in the color polarizing plate 9, from a perpendicular polarization shaft, only R light will penetrate from a level polarization shaft, and only B light will reach a liquid crystal cell 10 again. And since it is off, a polarization component carries out 90-degree polarization, the color polarizing plate 11 is reached, B light is intercepted here, and only R light comes to penetrate a liquid crystal cell 10.

[0031] In drawing 3 (a), drawing 3 is drawing showing the timing explaining the sequence of the color in one frame chosen by the liquid crystal shutter optical system 6 as showed drawing 2 (a), (b), (c), and (d), the sequence of the color chosen and drawing 3 (b) show ON/OFF state of a liquid crystal cell 8, and drawing 3 (c) shows ON/OFF state of a liquid crystal cell 10.

[0032] By carrying out ON/OFF control within one frame as liquid crystal cells 8 and 10 are shown in drawing 3 (b) and (c), n screens [n+1] of one frame which consist of the field of each color of B, G, W, and R like ... n+2 frames can be obtained now as shown in drawing 3 (a). Therefore, since W light can be chosen as not combination color but the independent color of RGB in this invention, it is possible to control generating of color breakup, color shading, etc. so that it may explain below.

[0033] First, reduction of the color breakup realized by this invention is explained. Drawing 4 (a) and (b) are drawings showing the condition that W light is chosen within one in the gestalt of this operation, in ** type. At drawing 11 shown previously, in order to obtain W light, all of R light, G light, and B light are made to be outputted with each frame in one frame, but in this invention, as shown in drawing 2 (d), W light can be obtained independently. That is, if W light is outputted in each frame as shown in drawing 4 (a), while the display time of each field will become for a short time as compared with the conventional thing, the part to which the chrominance signal of the front field produced by time amount gap was added is displayed whitely. Moreover, the chrominance signals B and R added slightly forward and backward are colors which are not very conspicuous in a small area field. Therefore, the white body P which does not almost have color breakup in the backside can be displayed now a before side as shown in drawing 4 (b). Moreover, since Body P consists of white independent colors, it can reduce generating of color breakup at a gently-sloping motion of the look shown by the arrow head V, and the time of nictitation.

[0034] In addition, it is also possible to reduce color breakup further by forming the field corresponding to neutral colors, such as Ye (yellow) color, in addition to the 4 fields of BGWR. Moreover, since W color is added with the gestalt of operation of this invention to the conventional example of three-primary-colors means of displaying, it is desirable to use what added some gamma amendment to the component signal of RGB.

[0035] Next, reduction of color shading realized by this invention is explained. Drawing 5 is drawing showing the generating condition of color shading in this invention. Although it becomes possible in this invention to reduce color shading by preparing the field of W color therefore, as for both the impression patterns of the driver voltage to liquid crystal cells 8 and 10, W color should be chosen when the (1).2 sheet liquid crystal cells 8 and 10 are set to ON.

(2) When both the .2 sheet liquid crystal cells 8 and 10 are set to ON, in both the next fields where W color is chosen, it is the electrical-potential-difference impression pattern with which liquid crystal cells 8 and 10 become off.

It is necessary to fulfill the conditions to say.

[0036] that is, period SH1 when both the liquid crystal cells 8 and 10 serve as [the off response of a liquid crystal cell 10] ON slow although the field of G color becomes off [a liquid crystal cell 8 / ON and a liquid crystal cell 10] **** -- it becomes W color to carry out color mixture to G color. moreover, period SH2 when the off response of liquid crystal cells 8 and 10 is alike at the latest at, and serves as ON although liquid crystal cells 8 and 10 are off similarly in both the fields of R color **** -- it becomes W color to carry out color mixture to R color.

[0037] Therefore, since W color comes to carry out color mixture to the field of G color, and the field of R color as illustrated by fulfilling the two above-mentioned conditions for example, as the former explained, for example, change of a color will decrease and color shading will be reduced rather than B color which is one in three primary colors carries out color mixture to R color or B color.

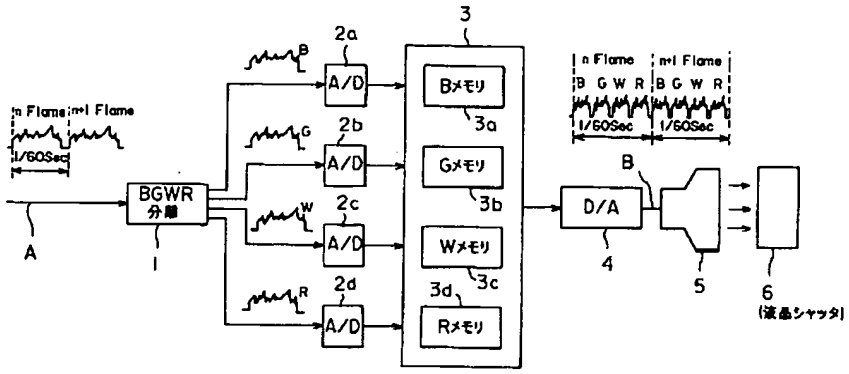
[0038] In addition, if the two above-mentioned conditions can be fulfilled, the sequence and the electrical-potential-difference impression pattern of colour selection in three primary colors of R, G, and B will not be limited to the pattern explained by drawing 2 and drawing 5 . Furthermore, driver voltage which carries out ON/OFF control of the liquid crystal shutter optical system 12 can also be made into an alternating current drive method.

[0039] Moreover, the sequence of the colour selection of R, G, and B in three primary colors and the combination of an electrical-potential-difference impression pattern enable it to reduce color shading, also when the response at the time of ON of liquid crystal cells 8 and 10 is slow.

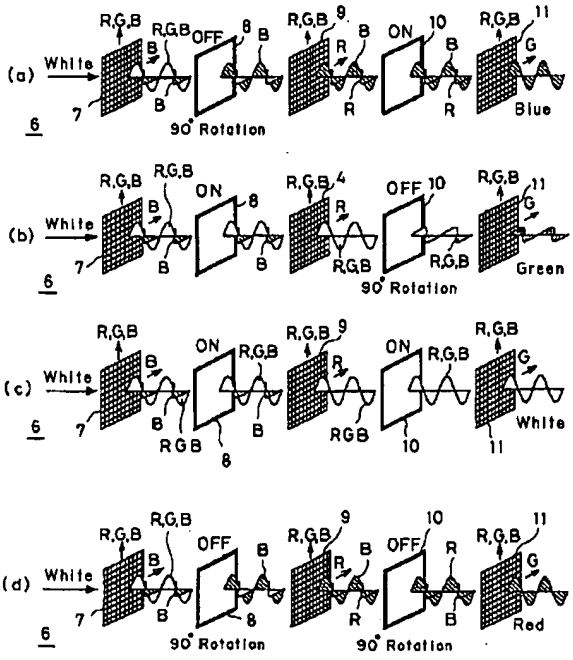
[0040]
[Effect of the Invention] As mentioned above, since, as for the display of this invention, the field of W color is prepared in the field serial mode in addition to the field of R, G, and B three primary colors as explained, a white image turns into a white field independent image, and the color breakup produced at the color breakup generated in the backside, the time of nictitation, etc. can be reduced a before [the travelling direction of the image of white with a motion] side. Moreover, since W color comes to carry out color mixture to R, G, and B each primary color also about color shading produced when the response of liquid crystal shutter optical system is slow, color change can be lessened conventionally. Therefore, this invention has the advantage that color breakup and color shading can be reduced to coincidence, by preparing the field of W color in addition to each field of the RGB three primary colors, and forming one frame.

[Translation done.]

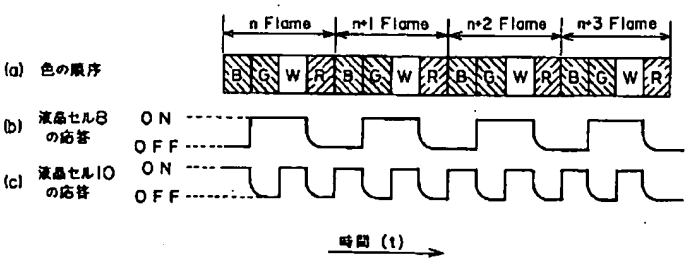
【図1】


n Flame
n+1 Flame
1/60Sec
A
BGWR
分離
1
2a
2b
2c
2d
A/D
3
Bメモリ
Gメモリ
Wメモリ
Rメモリ
3a
3b
3c
3d
B G W R B G W R
D/A
4
5
6
(液晶シャッタ)

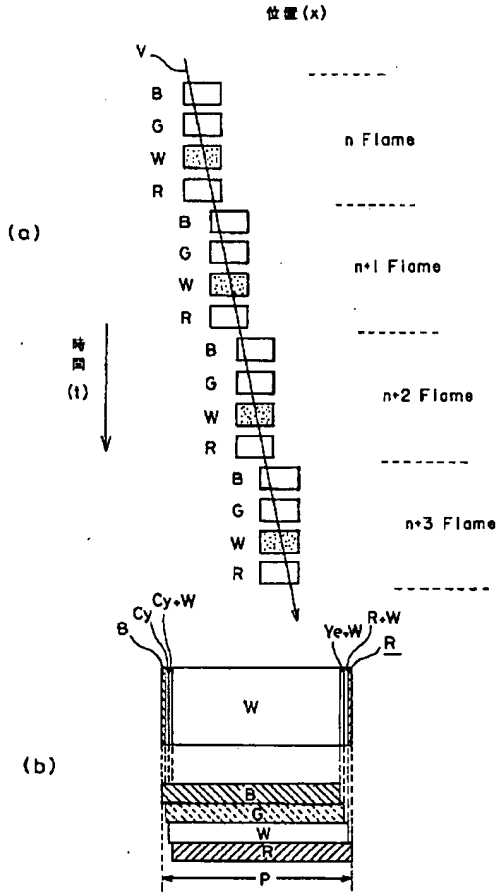
【図2】


(a) White
(b) White
(c) White
(d) White
R,G,B
B
R
G
OFF
ON
90° Rotation
Blue
Green
White
Red
RGB

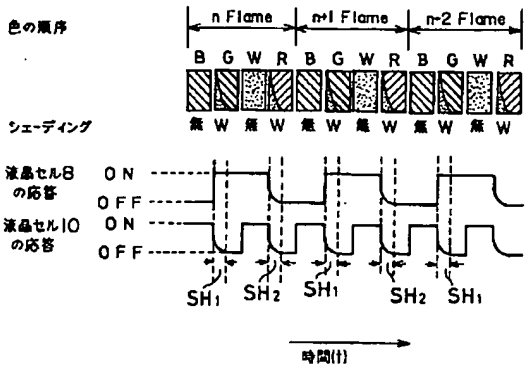
【図3】


n Flame
n+1 Flame
n+2 Flame
n+3 Flame
(a) 色の順序
(b) 液晶セル8の応答
(c) 液晶セル10の応答
ON
OFF
時間 (t)

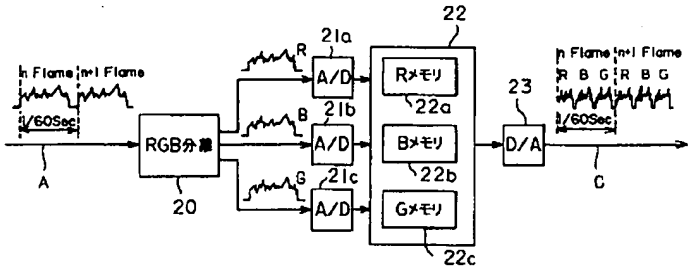
【図4】


位置(x)
時間(t)
(a)
(b)
n Flame
n+1 Flame
n+2 Flame
n+3 Flame
Cy
Cy+W
Ye+W
R+W
P

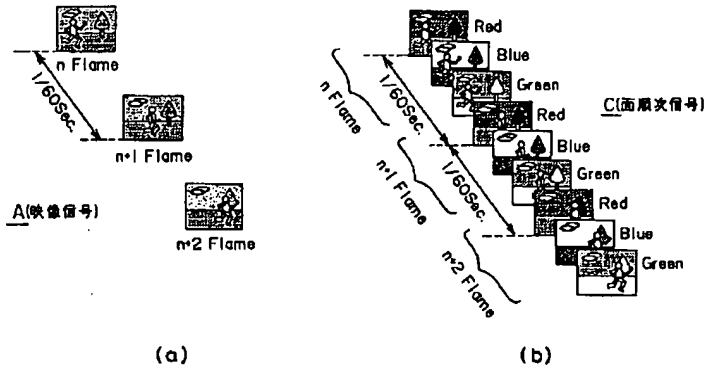
【図5】


色の順序
n Flame
n+1 Flame
n+2 Flame
B G W R B G W R B G W R
シェーディング
液晶セル8の応答
液晶セル10の応答
ON
OFF
SH1 SH2 SH1 SH2 SH1
時間(t)

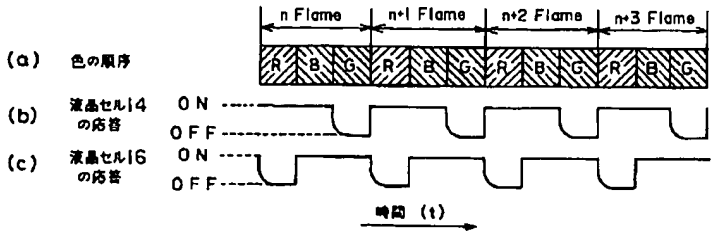
【図6】


22
21a
21b
21c
R
G
B
A/D
Rメモリ
Bメモリ
Gメモリ
22a
22b
22c
23
D/A
RGB分離
20
A
C
n Flame n+1 Flame
1/60Sec
n Flame n+1 Flame
R B G R B G
1/60Sec

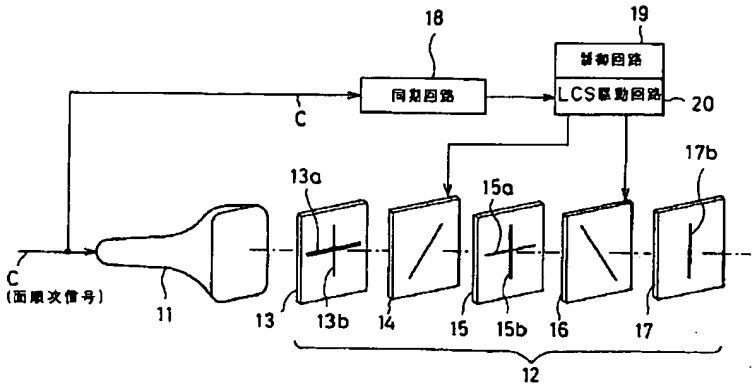
【図7】


n Flame
1/60Sec.
n+1 Flame
A(映像信号)
n+2 Flame
Red
Blue
Green
Red
Blue
Green
Red
Blue
Green
C(面順次信号)
n Flame
n+1 Flame
n+2 Flame
1/60Sec.
1/60Sec.
(a)
(b)

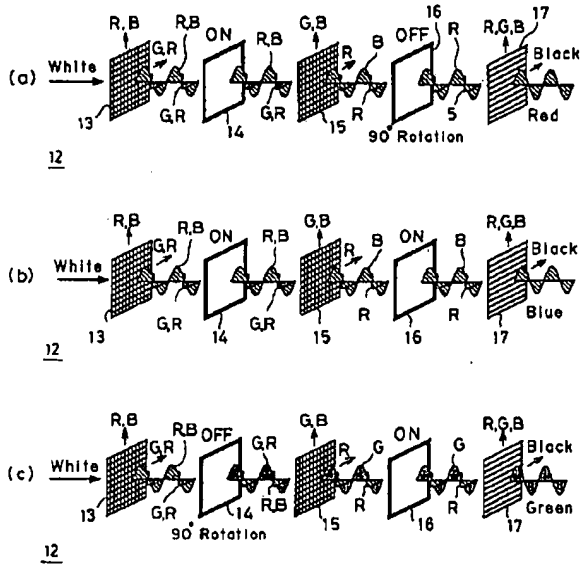
【図10】


n Flame
n+1 Flame
n+2 Flame
n+3 Flame
R B G R B G R B G R B G
(a) 色の順序
(b) 液晶セル14の応答
(c) 液晶セル16の応答
ON
OFF
ON
OFF
時間 (t)

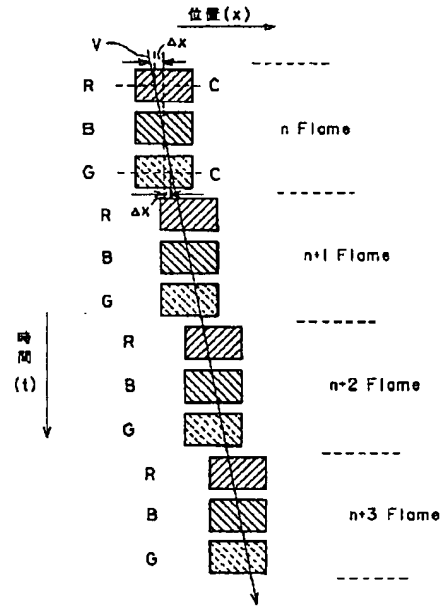
【図8】


18
19
制御回路
同期回路
LCS駆動回路
20
C
17b
13a
15a
C
(面順次信号)
11
13
13b
14
15
15b
16
17
12

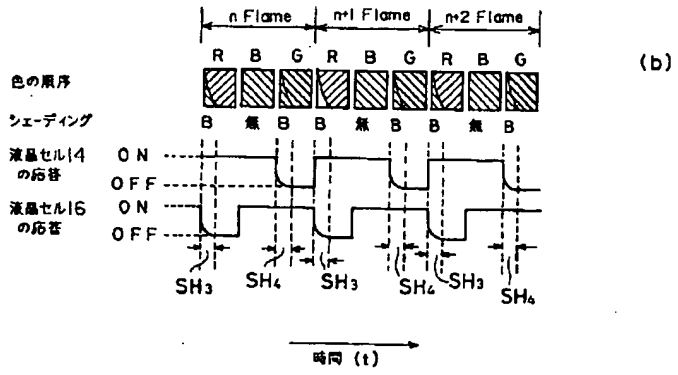
【図9】


(a)
White
R,B
G,R
ON
G,B
OFF
R,G,B
Black
Red
90° Rotation
(b)
Blue
(c)
Green
12

【図11】


位置(x)
時間(t)
n Flame
n+1 Flame
n+2 Flame
n+3 Flame
(a)
(b)
P
W
Cy
Mg
R
G
B

【図12】


n Flame
n+1 Flame
n+2 Flame
色の順序
シェーディング
液晶セル14の応答
液晶セル16の応答
ON
OFF
SH3
SH4
時間 (t)